	Application No.	Applicant(s)
Notice of Allowability	09/998,362	ELIE-DIT-COSAQUE ET AL.
	Examiner	Art Unit
	Blanche Wong	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *March 28, 2006*.

2. ☒ The allowed claim(s) is/are *2-10 (renumbered 1-9), 13-17 (renumbered 11-15), 18 (renumbered 10), 19-20 (renumbered 16-17)*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date May'06

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview,

followed by an email clarification, with V. Lawrence Sewell (Reg No. 22,753) on May 11,

2006.

The application has been amended as followed:

- Claim 12 is canceled.

- Claims 2,5,6,7,9,13 and 18 are amended as follows.

2.(currently amended) A method of dynamically allocating protection paths in a

wavelength-division multiplexed network including a plurality of nodes coupled by

communication links, comprising the steps of:

in each node, maintaining a database of information regarding the status of the network

including information associating channels in each link of the node to one or more protection

paths and information associating channels in each link to respective working paths;

in response to receiving a request for a new protection path to protect a defined working

path in one of said nodes:

using the database of said one node to identify links that have at least one

shareable channel which may be shared between the new protection path and one or more

existing protection paths;

using the database of said one node to identify links that do not have a shareable

channel but do have an unused channel that may be used for said new protection path;

assigning weighted costs to said identified links, where links that have at least one shareable channel are ~~weighted differently~~assigned a lower cost than links that do not have a shareable channel but do have an unused channel; and

determining a protection path using said identified links based on said costs, such that links not having at least one shareable channel are disfavored relative to links having at least one shareable channel.

5(Currently amended).   A method of dynamically allocating protection paths in a wavelength-division multiplexed network including a plurality of nodes coupled by communication links, comprising the steps of:

in each node, maintaining a database of information regarding the status of the network including information associating specific channels in each link of the node to one or more protection paths, information associating channels in each link to respective working paths, and information on the availability of specific channels to be used for a protection path;

in response to receiving a request for a new protection path to protect a defined working path in one of said nodes:

using the database of said one node to identify links that have at least one shareable channel which may be shared between the new protection path and one or more existing protection paths;

using the database of said one node to identify links that do not have a shareable channel but do have an unused channel that may be used for said new protection path;

assigning weighted costs to said identified links, where links that have at least one shareable channel are assigned a lower cost than links that do not have a shareable channel but do have an unused channel;

determining a protection path using said identified links based on said costs, such that links not having at least one shareable channel are disfavored relative to links having at least one shareable channel; and

transmitting a setup message to each node on the protection path, wherein the setup message includes a working path identifier.

6 (Currently amended).   A method of dynamically allocating protection paths in a wavelength-division multiplexed network including a plurality of nodes coupled by communication links, comprising the steps of:

in each node, maintaining a database of information regarding the status of the network including information associating specific channels in each link of the node to one or more protection paths, information associating channels in each link to respective working paths, and information on the availability of specific channels to be used for a protection path;

in response to receiving a request for a new protection path to protect a defined working path in one of said nodes:

using the database of said one node to identify links that have at least one shareable channel which may be shared between the new protection path and one or more existing protection paths;

using the database of said one node to identify links that do not have a shareable channel but do have an unused channel that may be used for said new protection path;

assigning weighted costs to said identified links, where links that have at least one shareable channel are assigned a lower cost than links that do not have a shareable channel but do have an unused channel; and

determining a protection path using said identified links based on said costs, such that links not having at least one shareable channel are disfavored relative to links having at least one shareable channel,

wherein said request is received by a source node.

7(Currently amended).   A method of dynamically allocating protection paths in a wavelength-division multiplexed network including a plurality of nodes coupled by communication links, comprising the steps of:

in each node, maintaining a database of information regarding the status of the network including information associating specific channels in each link of the node to one or more protection paths, information associating channels in each link to respective working paths, and information on the availability of specific channels to be used for a protection path;

in response to receiving a request for a new protection path to protect a defined working

path in one of said nodes:

using the database of said one node to identify links that have at least one shareable channel which may be shared between the new protection path and one or more existing protection paths;

using the database of said one node to identify links that do not have a shareable channel but do have an unused channel that may be used for said new protection path;

assigning weighted costs to said identified links, where links that have at least one shareable channel are assigned a lower cost than links that do not have a shareable channel but do have an unused channel; and

determining a protection path using said identified links based on said costs, such that links not having at least one shareable channel are disfavored relative to links having at least one shareable channel,

wherein said database identifies a status for each channel of each link.

9(Currently amended).   A method of dynamically allocating protection paths in a wavelength-division multiplexed network including a plurality of nodes coupled by communication links, comprising the steps of:

in each node, maintaining a database of information regarding the status of the network including information associating specific channels in each link of the node to one or more protection paths, information associating channels in each link to respective working paths, and information on the availability of specific channels to be used for a protection path;

in response to receiving a request for a new protection path to protect a defined working path in one of said nodes:

using the database of said one node to identify links that have at least one shareable channel which may be shared between the new protection path and one or more existing protection paths;

using the database of said one node to identify links that do not have a shareable channel but do have an unused channel that may be used for said new protection path;

assigning weighted costs to said identified links, where links that have at least one

shareable channel are assigned a lower cost than links that do not have a shareable channel but do have an unused channel; and

determining a protection path using said identified links based on said costs, such that links not having at least one shareable channel are disfavored relative to links having at least one shareable channel,

wherein said step of using the database of said one node to identify links that have at least one shareable channel includes the step of identifying links that are not used by the defined working path.

13(Currently amended).   The network of claim ~~12~~18, wherein said cost of a link having at least one shareable channel is based on the length of the link.

18(Currently amended).   A wavelength-division multiplexed network comprising:

a plurality of nodes coupled by communication links, each node comprising router circuitry for:

maintaining a database of information regarding the status of the network, including information associating specific channels in each link of the node to one or more protection paths, information associating channels in each link to respective working paths, and information on the availability of specific channels to be used for a protection path; and

in response to receiving a request for a new protection path to protect a defined working path in one of said nodes:

using the database of said one node to identify links that have at least one shareable channel which may be shared between the new protection path and one or more existing protection paths;

using the database of said one node to identify links that do not have a shareable channel but do have an unused channel that may be used for said new protection path;

assigning weighted costs to said identified links, where links that have at least one shareable channel are assigned a lower cost than links that do not have a shareable

channel but do have an unused channel; and

      determining a protection path using said identified links based on said costs, such that links not having at least one shareable channel are disfavored relative to links having at least one shareable channel,

    wherein said router circuitry identifies links that are not used by the defined working path.

2.   Claims 2-10 and 13-20 are allowed.

3.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

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May 12, 2006

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